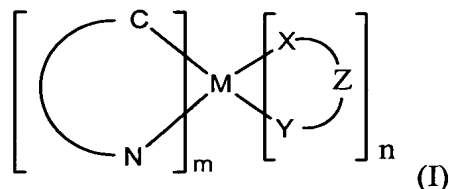


# Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

## Listing of Claims:

Claim 1. (currently amended): A compound represented by the Formula (I)



wherein



is a cyclometallated ligand,

M is a metal with an atomic weight of greater than 40,

X and Y are each independently selected from

a heteroatom selected from S, O, N, and P,

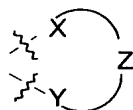
a heteroatom-containing group selected from OR, SR, NR<sub>2</sub> and PR<sub>2</sub>, wherein R is alkyl, aryl, or heteroaryl, and or

a heterocycle, wherein the heterocycle is a 3-7 membered aromatic or non-aromatic ring containing at least one heteroatom selected from S, O, N, and P,

Z is a group of the formula JR'<sub>p</sub>R''<sub>q</sub>

wherein J is hydrogen or a metal or a non-metal, R' and R'' are independently, alkenyl, heteroaryl, hydroxy, alkoxy, aryloxy, amino, alkylamino, arylamino, sulfido, alkylsulfido, arylsulfido, phosphino, alkylphosphino or arylphosphino and p and q are integers between 0 and 2,

m and n are integers selected from 1 and 2 wherein the sum of n + m is 3,



with the proviso that is anionic.

Claim 2. (previously presented): The compound of claim 1, wherein J is boron.

Claim 3. (cancelled)

Claim 4. (previously presented): The compound of claim 3, wherein R is a C<sub>1</sub>-C<sub>6</sub> alkyl, aryl, or heteroaryl.

Claim 5. (previously presented): The compound of claim 1, wherein R' and R'' are heteroaryl.

Claim 6. (previously presented): The compound of claim 5 wherein R' and R'' are selected from the group consisting of alkyls, aryls, and pyrazoles and p and q are each 1.

Claim 7. (previously presented): The compound of claim 4 wherein R' is pyrazole, R'' is a pyrazole and p and q are each 1.

Claim 8. (previously presented): The compound of claim 5 wherein X and Y are pyrazoles.

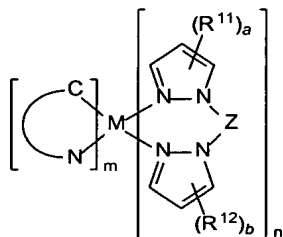
Claim 9. (withdrawn): The compound of claim 5, wherein Z is hydrogen.

Claim 10. (withdrawn): The compound of claim 1, wherein the heavy metal is selected from the group consisting of Ir, Pt, Pd, Rh, Re, Os, Tl, Pb, Bi, In, Sn, Sb, Te, Ag, and Au.

Claim 11. (withdrawn): The compound of claim 9 wherein the heavy metal is Ir.

Claim 12. (withdrawn): The compound of claim 9 wherein the heavy metal is Pt.

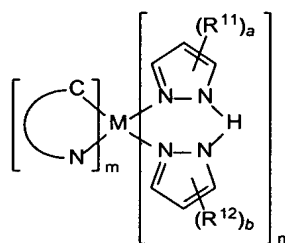
Claim 13. (previously presented): The compound of claim 1, having the Formula III:



III

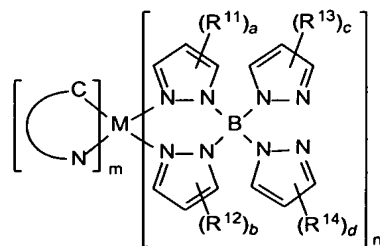
wherein each  $R^{11}$  and  $R^{12}$  is independently selected from alkyl, alkenyl, alkynyl, alkylaryl, CN,  $CF_3$ ,  $CO_2R$ ,  $C(O)R$ ,  $NR_2$ ,  $NO_2$ , OR, halo, aryl, heteroaryl, substituted aryl, substituted heteroaryl or a heterocyclic group, and additionally, or alternatively, any two adjacent substituted positions together form, independently, a fused 5- to 6-member cyclic group, wherein said cyclic group is cycloalkyl, cycloheteroalkyl, aryl, or heteroaryl, and wherein the fused 5- to 6-member cyclic group may be optionally substituted with one or more of alkyl, alkenyl, alkynyl, alkylaryl, CN,  $CF_3$ ,  $CO_2R$ ,  $C(O)R$ ,  $NR_2$ ,  $NO_2$ , OR, or halo; each R is independently alkyl, aryl, or heteroaryl; and subscript  $a$  and  $b$  are independently selected from 0, 1, 2, and 3.

Claim 14. (withdrawn): The compound of claim 5, having the formula IV:



IV.

Claim 15. (previously presented): The compound of claim 1, having the Formula V:

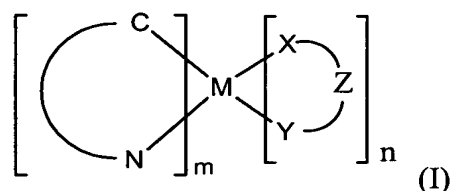


V

wherein each  $R^{11}$ ,  $R^{12}$ ,  $R^{13}$ , and  $R^{14}$  is independently selected alkyl, alkenyl, alkynyl, alkylaryl, CN,  $CF_3$ ,  $CO_2R$ ,  $C(O)R$ ,  $NR_2$ ,  $NO_2$ , OR, halo, aryl, heteroaryl, substituted aryl, substituted heteroaryl or a heterocyclic group, and additionally, or alternatively, any two adjacent substituted positions together form, independently, a fused 5- to 6-member cyclic group, wherein said cyclic group is cycloalkyl, cycloheteroalkyl, aryl, or heteroaryl, and wherein the

fused 5- to 6-member cyclic group cyclic group may be optionally substituted with one or more of alkyl, alkenyl, alkynyl, alkylaryl, CN, CF<sub>3</sub>, CO<sub>2</sub>R, C(O)R, NR<sub>2</sub>, NO<sub>2</sub>, OR, or halo; each R is independently alkyl, aryl and heteroaryl; and subscript *a*, *b*, *c*, and *d* are independently selected from 0, 1, 2, and 3.

Claim 16. (withdrawn): A compound represented by the formula (I)



wherein



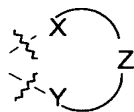
is a cyclometallated ligand,

M is a metal with an atomic weight of greater than or equal to 40,

X and Y are each an independently selected heteroatom-containing group or heterocycle,

m and n are integers selected from 1 and 2 wherein the sum of n + m is 2 or 3,

Z is H or is denoted by JR'<sub>p</sub>R''<sub>q</sub> wherein J is hydrogen or a metal or a non-metal, wherein J is selected from the group consisting of Al, Ga, In, Zn, Cd, Hg, Cu, Ag and Au. R' and R'' are independently H, alkyl, alkenyl, heteroaryl, halogen, hydroxy, alkoxy, aryloxy, amino, alkylamino, arylamino, sulfido, alkylsulfido, arylsulfido, phosphino, alkylphosphino or arylphosphino and p and q are integers between 0 and 2,



with the proviso that is anionic.

Claim 17. (withdrawn): The compound of claim 16, wherein X and Y are heterocycles.

Claim 18. (withdrawn): The compound of claim 17 wherein X and Y are pyrazoles.

Claim 19. (withdrawn): The compound of claim 18 wherein R' is pyrazole, R'' is a pyrazole and p and q are each 1.

Claim 20. (withdrawn): The compound of claim 16 wherein R' is selected from the group consisting of bidentate alkyl, aryl and carboxyl ligands and chelating coordination ligands, p is equal to 1 and q is equal to 0.

Claim 21. (withdrawn): The compound of claim 16 wherein R' and R'' are selected from the group consisting of alkyls, aryls, and pyrazoles and p and q are each 1.

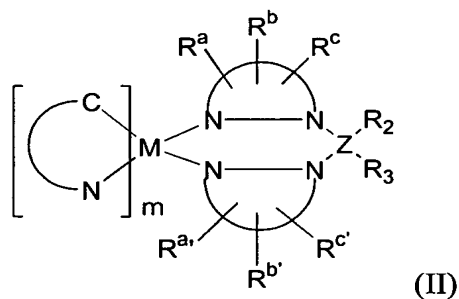
Claim 22. (withdrawn): The compound of claim 16, wherein Z is hydrogen.

Claim 23. (withdrawn): The compound of claim 16, wherein the heavy metal is selected from the group consisting of Ir, Pt, Pd, Rh, Re, Os, Tl, Pb, Bi, In, Sn, Sb, Te, Ag, and Au.

Claim 24. (withdrawn): The compound of claim 23 wherein the heavy metal is Ir.

Claim 25. (withdrawn): The compound of claim 23 wherein the heavy metal is Pt.

Claim 26. (withdrawn): The compound of claim 16 having the formula (II).



wherein



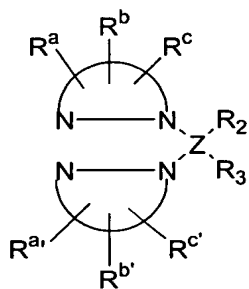
is a cyclometallated ligand,

M is a metal with an atomic weight of greater than 40,

Z is a divalent linker,

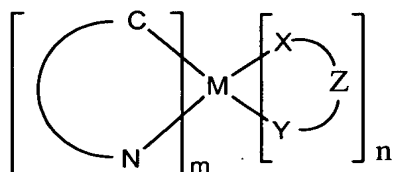
m is 1 or 2,

$R_a$ ,  $R_b$ ,  $R_c$ ,  $R'_a$ ,  $R'_b$  and  $R'_c$ , if present, are selected from H, alkyl, aryl, heteroaryl, halogen, alkoxy, amino, alkylamino, arylamino, sulfido, alkylsulfido, arylsulfido, phosphino, alkylphosphino or arylphosphino,

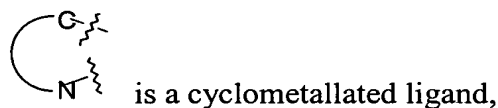


with the proviso that the structure is anionic.

Claim 27. (withdrawn): A light emitting device comprising an organic layer, the organic layer comprising a composition represented by the structure:



wherein

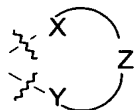


M is a metal with an atomic weight of greater than 40,

X and Y are each an independently selected heteroatom-containing group or heterocycle,

Z is a divalent linker,

m and n are integers selected from 1 and 2 wherein the sum of  $n + m$  is 2 or 3,



with the proviso that the structure is anionic.

Claim 28. (withdrawn): The light emitting device of claim 27, wherein Z is represented by the general structure  $JR'_pR''_q$  wherein J is hydrogen, a metal or a non-metal,  $R'$  and  $R''$  are

independently H, alkyl, alkenyl, aryl, heteroaryl, halogen, hydroxy, alkoxy, aryloxy, amino, alkylamino, arylamino, sulfido, alkylsulfido, arylsulfido, phosphino, alkylphosphino or arylphosphino and p and q are integers between 0 and 2.

Claim 29. (withdrawn): The light emitting device of claim 28 wherein J is selected from the group consisting of H, Ag, Zn, Al, B, Ga, In, Cd, Hg, Cu, Au.

Claim 30. (withdrawn): The light emitting device of claim 27, wherein X and Y are heterocycles.

Claim 31. (withdrawn): The light emitting device of claim 30 wherein X and Y are pyrazoles.

Claim 32. (withdrawn): The light emitting device of claim 28, wherein J is boron.

Claim 33. (withdrawn): The light emitting device of claim 32, wherein X and Y are both pyrazoles .

Claim 34. (withdrawn): The light emitting device of claim 33 wherein R' is pyrazole, b is equal to 0 and a is equal to 2.

Claim 35. (withdrawn): The light emitting device of claim 28 wherein R' is selected from the group consisting of bidentate alkyl, aryl and carboxyl ligands and chelating coordination ligands, b is equal to 0 and a is equal to 1.

Claim 36. (withdrawn): The light emitting device of claim 27 wherein R' and R'' are selected from the group consisting of alkyls, aryls, and pyrazoles and p and q are each equal to 1.

Claim 37. (withdrawn): The light emitting device of claim 27, wherein Z is hydrogen.

Claim 38. (withdrawn): The light emitting device of claim 37, wherein X and Y are pyrazoles.

Claim 39. (withdrawn): The light emitting device of claim 27, wherein the heavy metal is selected from the group consisting of Ir, Pt, Pd, Rh, Re, Os, Tl, Pb, Bi, In, Sn, Sb, Te, Ag, Au.

Claim 40. (withdrawn): The light emitting device of claim 39 wherein the heavy metal is Ir.

Claim 41. (withdrawn): The light emitting device of claim 39 wherein the heavy metal is Pt.

Claim 42. (withdrawn): The light emitting device of claim 27 wherein at least one of X and Y is selected from the group consisting of OR, SR, NR<sub>2</sub>, PR<sub>2</sub>.

Claim 43. (withdrawn): The light emitting device of claim 49, wherein R is selected from the group consisting of H, alkyl, aryl, heteroaryl, halogen, alkoxy, amino, alkylamino, arylamino, sulfido, alkylsulfido, arylsulfido, phophino, alkylphosphino or arylphosphino.